

# *Brian Kooyman, Sprint Nextel Corp.*

- *Manager Wireless Network/Site Development*
  - > *15 years of experience in telecom Site Development*
  - > *National scale deployment programs for ~7,000 sites & ~5,000 site augmentations*
  - > *Managed Sprint's Site Development Standards organization*
  - > *Consolidation of Sprint & Nextel's systems of record housing all site management data & scanned documents*
  - > *Current focus on collocation support services and national lease management*
    - *Manage the remaining SSUSA assets*
    - *Review and monitor vendor led leasing for Network Vision*
    - *Work with Sprint's 4G affiliate (Clearwire) when collocating*

# Colocation Business Drivers



- *Spectrum is the foundation of any wireless network. The more spectrum, the bigger the network's pipe and the greater its ability to move large amounts of data.*
  - *Think of it like a freeway. The more lanes, you have the more traffic you can support.*
  - *When freeways become congested, choices are to build more roads (sites) or add lanes (spectrum).*
- *Explosive growth in the number of Smartphone users has become a key focal point. The customer's appetite for data drives carriers to upgrade site infrastructure .*
  - *Site Optimization*
  - *Equipment Upgrades*
  - *Microwave Backhaul*
  - *New Site Deployment*

# Colocation Business Drivers

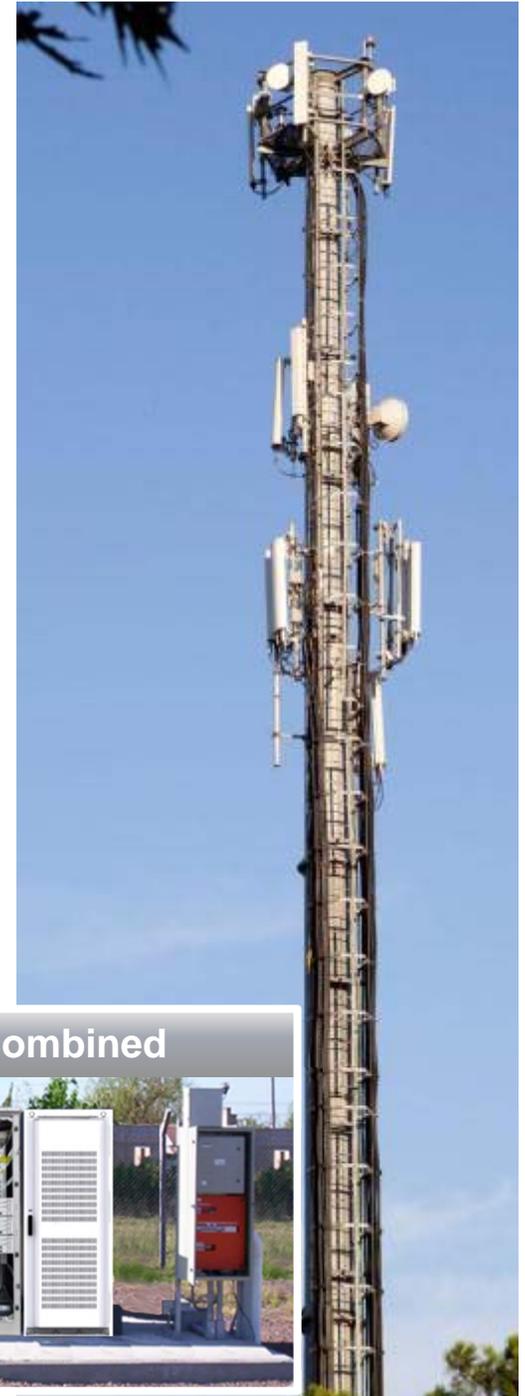


- *Carriers like Sprint enter into Lease Agreements with tower owners, competitor carriers, electrical utilities, as well as real estate companies.*
  - *Repeatable lease & deployment process*
  - *Database info on available portfolio capacity*
  - *Structured maintenance of tower assets*
  - *Local expertise to assist with deployment*
  - *Reduction in cost to market vs "new steel"*

# Current Activities

*Sprint has launched its Network Vision program to upgrade its site infrastructure. Sprint is installing the next-generation wireless network expected to revolutionize the telecom industry and provide exponential enhancements to business communications*

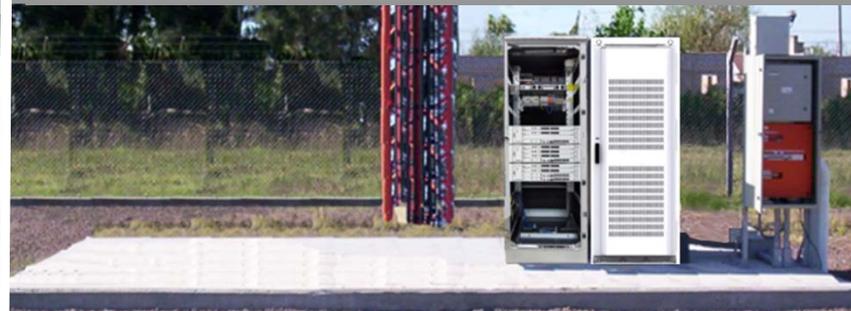
- *Replace tower hardware for multiple networks with integrated, multimodal equipment*
- *In alignment with Sprint's focus on "Green" Technologies, Multimodal sites will demand less power.*
- *Integrated radios/antennas for stronger signal, less interference.*
- *Reduced demand for ground footprint but increases demand for structural capacity at the tower top.*



Individual 3G & 4G BTS Today



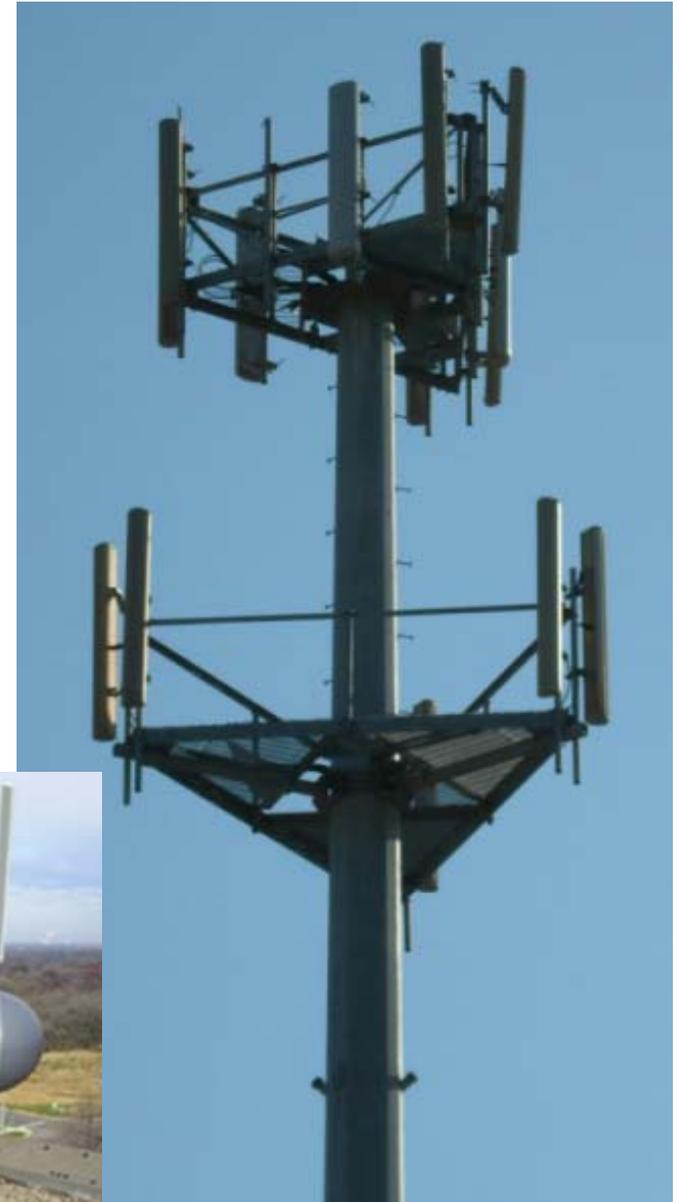
Multimode BTS 3G/4G Combined



# What's in a Colocation?

## *In the Air:*

- *Antenna Platform*
- *Antenna Mounts*
- *Antennas*
- *Low-Noise Amplifiers (LNAs)*
- *Microwave Dishes (MW)*
- *Remote Radio Units (RRU)*
- *Transmission Lines*
  - *Coaxial Cable (Coax)*
  - *Fiber Optics*
- *Grounding / Lightning Protection*



# What's in a Colocation?

## ***On The Ground:***

- *Cabinet Support*
  - *Steel Platform*
  - *Pre-fabricated Shelter,*
  - *Concrete Pad*
  - *Sled Mount*
- *Ice Bridge / Cable Protection*
- *Radio Equipment (Base Station)*
- *Telco / Backhaul*
  - *Fiber or Microwave*
- *Emergency Generator*
- *Grounding / Lightning Protection*
- *Fencing/Screening*



# Examples of Colocation Structures

